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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/618,797	07/18/2000	Toshio Yamada	WATK : 197	8862

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EXAMINER

DOROSHENK, ALEXA A

ART UNIT	PAPER NUMBER
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1764

DATE MAILED: 02/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/618,797

Applicant(s)

YAMADA ET AL.

Examiner

Alexa A. Doroshenk

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 12 and 13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 November 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings were received on November 30, 2004. These drawings are acceptable.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 8 continues to be rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 8, the phrase "like" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "like"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical

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Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000.

Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 1, 4 and 5 are rejected under 35 U.S.C. 102(e) as being anticipated by Sussmilch et al. (6,405,437).

With respect to claim 1, Sussmilch et al. discloses a canned ceramic honeycomb structure (12) comprising:

- a metal case (32);

- a ceramic honeycomb structure (28) not loaded with catalyst (col. 8, lines 31-34) contained within said metal case (32);

- a holding material (anchor mat, 30) between said ceramic honeycomb structure (28) and said metal case (32) having a common longitudinal direction and at least one peripheral edge perpendicular to said longitudinal direction (see figures 5 and 9); and

- an impermeable layer (end cap, 142) located on said at least one edge plane of the holding material (30).

With respect to claim 4, an edge plane of the ceramic honeycomb structure (28) and the edge plane of the holding material (30) having the impermeable layer thereon are substantially in common (see figure 9).

With respect to claim 5, it can be seen that the end cap (142) is adhered to the holding material (30) along one edge plane (see figure 9).

Claim Rejections - 35 USC § 103

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 2 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sussmilch et al. (6,405,437).

With respect to claim 2, the apparatus of Sussmilch et al. is substantially the same as that of the instant claim, but is silent as to the specific length of the impermeable layer.

However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to select an appropriate size for the impermeable layer on the basis of its suitability for the intended use, absent showing any unexpected results, and since it has been held that when the only difference between the prior art device and a claim is a recitation of relative size, and the device with the relative size would not perform differently than that prior art device, the claimed device is not patentably distinct.

With respect to claim 10, the apparatus of Sussmilch et al. is substantially the same as that of the instant claim, but is silent as to the specific thickness of the partitions of the ceramic honeycomb structure.

However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to select an appropriate size for the partitions of the ceramic honeycomb structure on the basis of its suitability for the intended use, absent showing any unexpected results, and since it has been held that when the only difference

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between the prior art device and a claim is a recitation of relative size, and the device with the relative size would not perform differently than that prior art device, the claimed device is not patentably distinct.

8. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sussmilch et al. (6,405,437) in view of Rosynsky et al. (4,142,864).

Sussmilch et al. illustrates of an end cap (142) providing an impermeable layer on the edge of the holding material, but fails to disclose alternative materials by which to achieve this same result.

Rosynsky et al. teaches a similar exhaust gas treatment apparatus with a ceramic honeycomb (28), a metal case (12), a holding material (42/43) and an impermeable layer (45) on an edge of the holding material (see figures 1 and 3). Rosynsky et al. teaches wherein their impermeable layer (45), or plug, aids in preventing passage of the exhaust gas into the area between the honeycomb element and the casing, thereby assuring that all of the gas to be treated passes through the honeycomb (col. 3, lines 11-15). The pressure properties of the impermeable layer (45) are approximately equal to or less than those of the holding material (42/43) in order to inhibit axial movement of the honeycomb element (col. 2, lines 50-66).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to select the plug member of Rosynsky et al. for use in the apparatus of Sussmilch et al. in order to ensure that all of the exhaust gas being treated travels through the ceramic honeycomb structure as well as to inhibit movement of the honeycomb structure within the casing.

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9. Claims 6, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sussmilch et al. (6,405,437) in view of Close et al. (3,959,865).

Sussmilch et al. illustrates of an end cap (142) providing an impermeable layer on the edge of the holding material, but fails to disclose alternative materials by which to achieve this same result.

Close et al. discloses a similar exhaust gas treatment apparatus which comprises a ceramic honeycomb (20), a metal case (10), a holding material (30) and an impermeable layer (22) on an edge of the holding material (see figure 1). Close et al. further disclose wherein the impermeable material (22) is a thin film of paper which is impregnated with impermeable matter including fiber and organic materials (col. 3, line 55- col. 4, line 24).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to select the impermeable material of Close et al. for use in the apparatus of Sussmilch et al. in order to ensure that all of the exhaust gas being treated travels through the ceramic honeycomb structure as well as to inhibit movement of the honeycomb structure within the casing.

10. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sussmilch et al. (6,405,437) in view of Harding (6,017,498).

Sussmilch et al. illustrates of an end cap (142) providing an impermeable layer on the edge of the holding material, but fails to disclose alternative materials by which to achieve this same result.

Harding discloses a similar exhaust gas treatment apparatus which comprises a ceramic honeycomb (6), a metal case (4), a holding material (8, 8') and an impermeable layer (38) made of a rope (col. 3, lines 52-55) on an edge of the holding material (see figures 1 and 3) in order to form a gas tight seal (col. 3, lines 52-57). Harding also discloses wherein the impermeable layer (38) made of a circular cross sectional rope (col. 3, lines 52-55) and impregnated with impermeable matter (col. 3, line 65- col. 4, line 4).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to select the impermeable rope material of Harding for use in the apparatus of Sussmilch et al. in order to ensure that all of the exhaust gas being treated travels through the ceramic honeycomb structure by the gas tight seal.

11. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sussmilch et al. (6,405,437) in view of Machida et al. (5,782,089).

Sussmilch et al. discloses wherein the anchor mat is made of "an intumescent material or other suitable material" (col. 3, lines 39-44), but fails to disclose a non-intumescent ceramic fiber mat.

Machida et al. discloses a similar exhaust gas treatment apparatus which comprises a ceramic honeycomb (1), a metal case (2), a holding material (3) and an impermeable layer (4) on an edge of the holding material (see figure 1). Machida et al. further discloses wherein the holding material (3) is a ceramic fiber mat in a compressed state (col. 3, lines 36-41). It would have been obvious to one of ordinary skill in the art at the time the invention was made to select the compressed ceramic fiber mat of

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Machida et al. for the anchor mat of Sussmilch et al. since it merely the selection of a mat material recognized as suitable for a ceramic honeycomb exhaust treatment device.

Response to Arguments

Drawings

The objection to the drawings is withdrawn due to applicant's amendments and arguments.

35 USC 112, Second Paragraph

The rejection of claim 9 is withdrawn due to applicant's amendment to the claim.

The rejection of claim 8 is maintained since the phrase "like fiber" continues to appear in the claim.

35 USC 102 & 103 Rejections

Applicant argues that each of the applied references have ceramic honeycomb structures which have catalyst material and therefore do not read on the claims reciting that "a ceramic honeycomb structure not loaded with a catalyst".

The examiner agrees with applicant and has presented new grounds of rejection above.

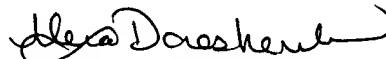
Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexa A. Doroshenk whose telephone number is 571-272-1446. The examiner can normally be reached on Monday - Thursday from 9:00 AM - 7:30 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Alexa A. Doroshenk
Examiner
Art Unit 1764